

The EU spending on fight against climate change

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The EU spending on fight against climate change

IN-DEPTH ANALYSIS

Abstract

The present note has been drafted as a background document for the hearing on 'The EU Budget and the Paris Climate Agreement' of the EP BUDG and ENVI Committees. It aims at providing an introduction to the topic, looking at the EU commitments in the field of climate from a budgetary angle. It contains a brief overview of the policy context, a presentation of budgetary aspects, including a short part on methodology of tracking the climate-related expenditure and on distinction between adaptation and mitigation measures, and finishes with concluding remarks on the state of play as regards EU budget for fight against climate change.

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INTRODUCTION

The present note has been drafted as a background document for the hearing on 'The EU Budget and the Paris Climate Agreement' organised by the Committee on Budgets and the Committee on Environment, Public Health and Food Safety of the European Parliament, on 24 April 2018. It aims at providing an introduction to the topic, looking at the EU commitments in the field of climate from a budgetary angle. It is based on publicly available information.

The first section gives a brief overview of the policy context, in particular the greenhouse gas phenomenon, actions taken at international level, and the EU actions. The second part focuses on budgetary aspects: briefly presents the methodology for estimating the climate-related expenditure in the EU budget, provides the related figures and their breakdown per budget's headings, programmes and, tentatively, mitigation and adaptation activities. The third section concludes, focusing on main weaknesses of the EU climate action identified by external analysts, in particular the coherence of EU policies in this respect.

1. POLICY CONTEXT

In 1992, countries adopted the United Nations Framework Convention on Climate Change (UNFCCC) to consider options for limiting average global temperature increases and the resulting climate change. This had led to the adoption, in 1997, of the Kyoto Protocol, which legally binds developed countries to achieving greenhouse gas (GHG) emission reduction targets. In the Copenhagen Accord of December 2009, the international community agreed on the need to reduce emissions in order to prevent global temperature increases from exceeding 2 °C compared with pre-industrial levels (no more than 1 °C above today's level), a commitment taken up by the EU as early as 1996.¹ Furthermore, developed countries committed in Copenhagen to a goal of mobilising, jointly, USD 100 billion per year for climate-oriented spending in developing countries by 2020 and beyond.

With the aim of emissions' reduction in mind, the international community decided to work towards an international climate agreement for the period after 2020, concluded at the COP21 meeting in Paris, in November 2015² where the will to "holding the increase in the global average temperature to well below 2 °C above pre-industrial levels" was reiterated and the intention to pursue "efforts to limit the temperature increase to 1.5 °C"³ stated.

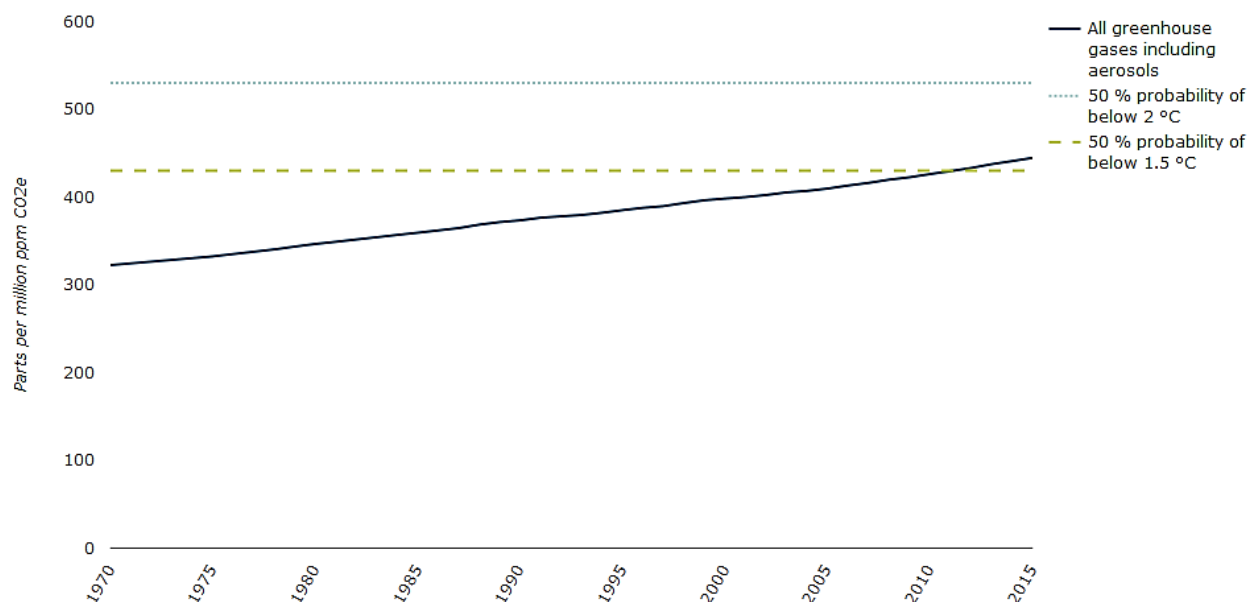
¹ See: http://europa.eu/rapid/press-release_PRES-96-188_en.htm?locale=en.

² On 4 October 2016 the European Parliament gave its consent to Paris agreement, which shortly after entered into force on 4 November 2016 as consequence of the threshold reached of more than 55 parties accounting for more than 55% of global emissions. National ratification procedures in the EU are still on their way, so far the following countries have completed them: Austria, France, Germany, Hungary, Malta, Portugal and Slovakia.

³ <https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>

There is a serious risk of falling short of the targets set. If we observe the trends in global GHG concentrations⁴ by 2015 its level reached an average of 450 ppm (parts per million) CO₂e (carbon dioxide equivalent). This level would need to be kept to achieve a 50% probability of keeping the increase in global temperature below 1.5 °C⁵ (see Figure 1).

Figure 1: Observed trends in global GHG concentrations, including aerosols



Source: EEA

1.1. GREENHOUSE GAS PHENOMENON

When sunlight reaches the Earth's atmosphere, a part of it is reflected from clouds and particles in the air back into space. Most of the light crosses the atmosphere and reaches the Earth's surface. Some of this light is reflected, in particular by light surfaces such as snow, and another part is absorbed by the Earth by dark surfaces such as vegetation or roads. The Earth also emits energy naturally in the form of infra-red radiation. When the energy reflected or emitted by the Earth's surface crosses the atmosphere, some of this energy is absorbed by the atmosphere. The higher the concentration of GHGs in the atmosphere, the higher the proportion of the energy absorbed by the atmosphere. This energy then heats the atmosphere, as in a greenhouse. In the long run, a hotter atmosphere changes the Earth's climate.⁶

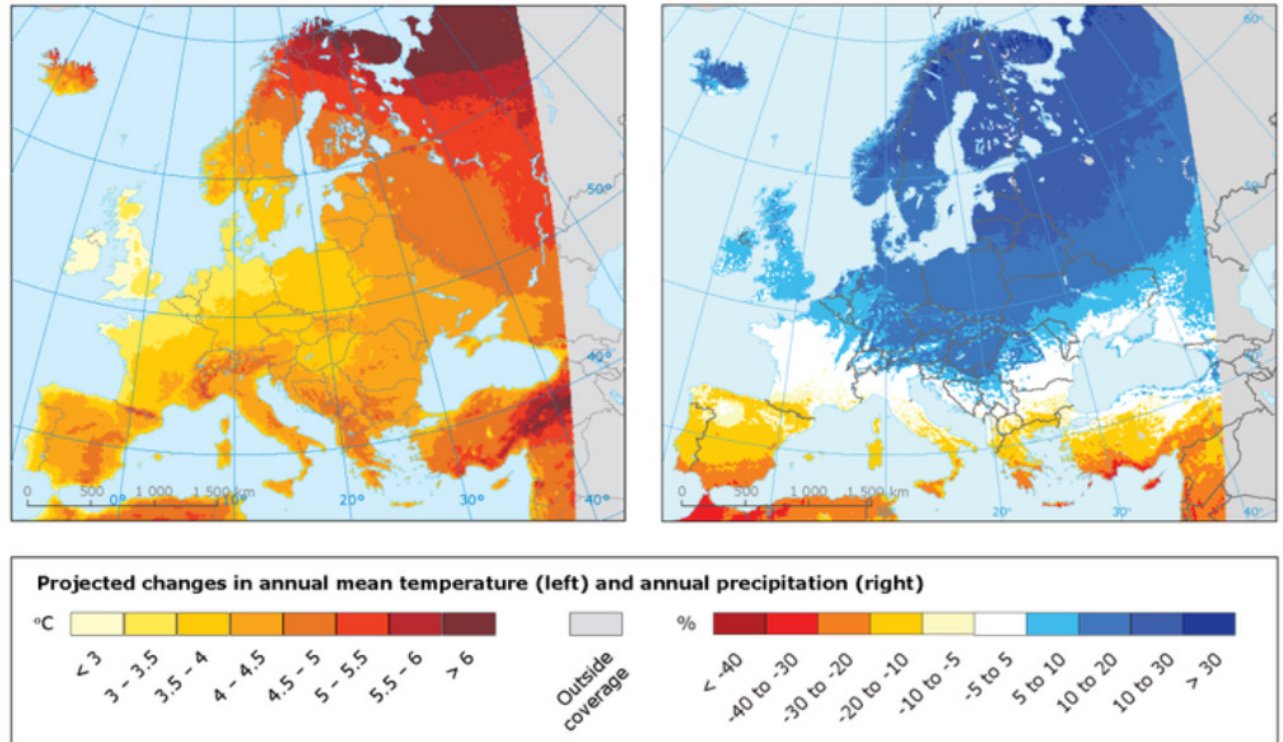
⁴ The greenhouse gas emitted in the greatest quantity is carbon dioxide (CO₂), which makes up around 80 % of the EU's total greenhouse gas emissions, followed by methane (CH₄) at 11 %, nitrous oxide (N₂O) at 6 % and fluorinated gases at 3 %.

⁵ <https://www.eea.europa.eu/data-and-maps/indicators/atmospheric-greenhouse-gas-concentrations-10/assessment>

⁶ Source: Court of Auditors Report 2017: EU action on energy and climate change

The figure below shows how Europe is supposed to be impacted by this phenomenon with a high emissions scenario for 2071-2100, compared to 1971-2000.

Figure 2: Projected changes in annual mean temperature and annual precipitation for 2071-2100, compared to 1971-2000



Source: EEA <https://www.eea.europa.eu/data-and-maps/daviz>

Europe will be impacted by more frequent and intense heavy precipitation events and floods, more frequent heat waves, retreating glaciers and changing terrestrial ecosystems. In Central and Eastern Europe, summer rainfall is projected to decrease, leading to higher water stress and increase risk of fires. In Northern Europe, more frequent winter floods, endangered ecosystems, and ground destabilization are foreseen. In the Mediterranean and Southern Europe, higher temperatures and drought are predicted to reduce water availability and crop productivity as well as to increase the risk of wildfires⁷.

The figure below lists climate change effects as projected geographically. More detailed list of recent weather- and climate-related natural hazards in Europe can be found in Annex I.

⁷ Source: <http://www.environmentalmigration.iom.int/maps>

Figure 3: Impact of climate change in Europe



Source: EEA <https://www.eea.europa.eu/publications/climate-change-impacts-and-vulnerability-2016/key-findings>

1.2. EU ACTION AGAINST CLIMATE CHANGE

Action against climate change consists of two approaches: adaptation and mitigation. Mitigation involves efforts to reduce GHG emissions and stabilising its levels but also actions aiming at enhancing carbon sequestration such as: afforestation and restoration of soils and water basins. Adaptation involves preparatory measures to adapt to the effects of changing climate such as: rising sea levels, extreme weather conditions or food insecurity.

1.2.1. Mitigation

Well before Paris Agreement entered into force, the EU had committed to reduce GHG emissions in a substantial way. In 2008, in its *Climate and Energy package* the EU pledged for a 20% reduction in GHG emissions (compared with 1990 levels), 20% share of renewable energy in energy consumption and 20% gains in energy efficiency by 2020. In 2014 in A *policy framework for climate and energy in the period from 2020 to 2030* the EU repeated the

need for reduction of GHG emissions to at least 40% and for 27% share of renewable energy in energy consumption and same for energy efficiency by 2030. By 2050 the EU intends to reduce its GHG emissions by 80-95% compared to 1990 comprising all main sectors as stated in *A roadmap for moving to a competitive low-carbon economy in 2050*. The box below summarised EU targets set for 2020, 2030 and 2050.

Box 1: EU targets for reducing greenhouse gas emissions

- **By 2020¹³:**
 - 20 % reduction in greenhouse gases emissions (from 1990 levels);
 - 20 % share of renewable energy in energy consumption;
 - 20 % gains in energy efficiency.
- **By 2030¹⁴:**
 - at least 40 % reduction in greenhouse gases emissions (from 1990 levels);
 - at least 27 % share of renewable energy in energy consumption;
 - indicative target to improve energy efficiency by at least 27 % compared to projections of future energy consumption¹⁵.
- **By 2050¹⁶,** the EU intends to reduce its greenhouse gas emissions by between 80 % and 95 % compared to 1990 comprising all main sectors.

13 COM(2008) 30 final of 23 January 2008, '20 20 by 2020 Europe's climate change opportunity' (2020 Climate and Energy Package).

14 COM(2014) 15 final of 22 January 2014, 'A policy framework for climate and energy in the period from 2020 to 2030' (2030 Climate and Energy Framework).

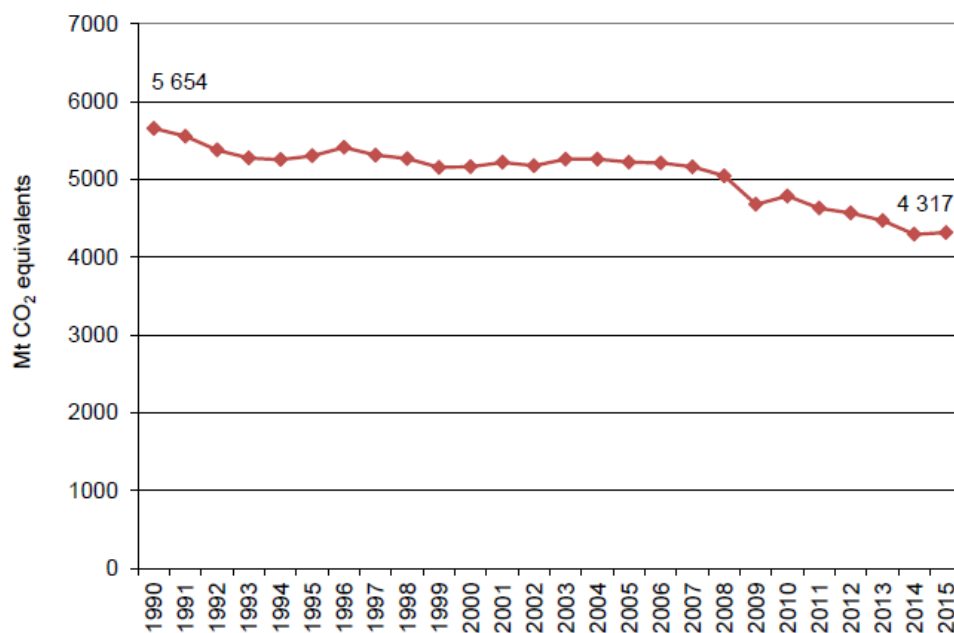
15 The 2030 energy efficiency target will be reviewed in 2020 having in mind a 30 % target.

16 COM(2011) 112 final of 8 March 2011, 'A roadmap for moving to a competitive low-carbon economy in 2050'. The European Council and the European Parliament endorsed this approach proposed by the Commission in February 2013 and March 2013 respectively.

Source: Court of Auditors' special report 31/2016 "Spending at least one euro in every five from the EU budget on climate action: ambitious work underway, but serious risk of falling short"

In 2015, total GHG emissions in the EU were 23.6 % (1 336 million tonnes CO₂ equivalents) below 1990 levels. Most recent analysis see the emissions to have increased by 0.5 % (23 million tonnes CO₂ equivalent) between 2014 and 2015 mainly due to a higher transport demand and the higher heat demand by households and services due to slightly colder winter conditions in Europe⁸ - see figure 4 below.

⁸ Source: EEA Annual European Union greenhouse gas inventory 1990–2015 and inventory report 2017

Figure 4: Greenhouse gas emissions in the EU

Notes: GHG emissions data for the EU-28 plus Iceland as a whole refer to domestic emissions (i.e. within the territory), include indirect CO₂, and do not include emissions and removals from LULUCF; nor do they include emissions from international aviation and international maritime transport. CO₂ emissions from biomass with energy recovery are reported as a Memorandum item according to UNFCCC guidelines and are not included in national totals. In addition, no adjustments for temperature variations or electricity trade are considered. The global warming potentials are those from the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Source: EEA

Apart from the EU reduction of GHG and improvement in renewable energy performance and energy consumption shares, “climate smart forestry”⁹, land management (soil organic carbon enhancement) and carbon capture and storage (CCS) technologies¹⁰ will play an important role in climate change mitigation in the EU. For the latter - 2 large scale CCS plants are being set up in the UK and the Netherlands out of 12 which were initially planned in Europe to be set up by 2015, cancelled mainly due to infrastructure costs these technologies require.

1.2.2. Adaptation

According to a 2017 report by the European Environment Agency,¹¹ the total reported economic losses caused by climate change in Europe were almost EUR 400 billion over the period 1980–2013. The average damage has varied between EUR 7.6 billion per year in the 1980s and EUR 13.7 billion in the 2000s.

⁹ See: Nabuurs G.-J. et al. (2017), “By 2050 the Mitigation Effects of EU Forests Could Nearly Double through Climate Smart Forestry”, *Forests* Vol. 8, Issue 12, p. 484.

¹⁰ CCS is the process of capturing waste carbon dioxide (CO₂) from large point sources, such as fossil fuel power plants, transporting it to a storage site, and depositing it where it will not enter the atmosphere, normally an underground geological formation.

¹¹ European Environment Agency (2017) “Climate change, impacts and vulnerability in Europe 2016. An indicator-based report”, EEA Report No 1/2-017.

Some studies show the economic losses in the EU could be around EUR 190 billion per year (with a net welfare loss estimated to be equivalent to 1.8 % of current GDP) by the end of the century under a reference scenario with greatest impact in southern Europe due to a sea level rise, and in the absence of adaptation measures it would triple from EUR 5 to 17 billion per year only in these regions. The annual cost of damage from river floods is estimated at EUR 20 billion by the 2020s and EUR 46 billion by the 2050s.¹²

In December 2017 the European Commission published the study supporting the Evaluation of the EU Adaptation Strategy¹³ in which it reconfirmed the necessity to reinforce adaptation measures. The study recommends continuation in promoting action by Member States, promoting better-informed decision making through the European Climate Adaptation Platform ([Climate-ADAPT](#)) (where examples of adaptation options, case studies of implemented actions, and an adaptation-support tool can be found). It recommends as well that the EU funding plays a catalytic role (LIFE, CAP, cohesion, H2020 projects, but also ESF and EMFF) and that the 'mainstreaming' of climate change adaptation is taking place within various EU policies, such as freshwater and coastal management, biodiversity and nature protection, and disaster-risk reduction¹⁴.

Additionally, taking into account the significant growth of number of natural disasters per year in Europe¹⁵, the EU decided to strengthen budgetary support in this respect. As from July 2017¹⁶ new financing schemes were introduced for the regions hit by natural disasters. This comes on the top of the already available EUR 500 billion from the EU Solidarity Fund each year. The assistance will be financed from the European Fund for Regional Development (ERDF) with a total amount of up to EUR 9.8 billion by 2020, accounting for 5% of the total amount of the fund.

¹² Ciscar, J. C. (ed.) (2014), *Climate impacts in Europe: The JRC PESETA II Project*, JRC Scientific and Policy Reports EUR 26586 EN, JRC87011, European Commission — Joint Research Centre Institute for Prospective Technological Studies, Institute for Environment and Sustainability, Seville.

¹³ https://ec.europa.eu/clima/sites/clima/files/consultations/docs/0035/summary_interim_findings_en.pdf

¹⁴ For more information, see the European Environment Agency briefing "[Climate change impacts and adaptation 2015](#)".

¹⁵ Source: data of the European Environment Agency, https://www.eea.europa.eu/data-and-maps/daviz/natural-catastrophes#tab-chart_1

¹⁶ [Regulation \(EU\) 2017/1199 of 4 July 2017](#) amending Regulation (EU) No 1303/2013 as regards specific measures to provide additional assistance to Member States affected by natural disasters, OJ L176/1 of 7.7.2017.

2. EU FINANCING FOR CLIMATE CHANGE

2.1. TRACKING THE FINANCING OF FIGHT AGAINST CLIMATE CHANGE

In 2011 the European Commission committed to allocate 20% of the total EU annual budget to fight against climate change¹⁷.

In line with the logic of mainstreaming the climate objectives into all EU policies, there are no dedicated budgetary chapters or lines allowing for the immediate identification of related expenditure. The Commission has developed a methodology for tracking the climate-related expenditure, using existing international standards, such as those of the OECD, as a reference. It relies on the concept of indicators attributed to financial envelopes for specific programmes and policy areas according to their significant (100%), moderate (40%) or insignificant (0%) contribution towards climate change objectives. Based on the percentages attributed, the total amount spent on climate change can be then indicated. Implications and limitations of these methodology should be duly taken into account when using the resulting figures. For instance, the same expenditure may be tracked for more than one priority (e.g. both climate and biodiversity).

The European Court of Auditors, in their Special Report dedicated to the climate action (31/2016) pointed out to the shortcomings of the approach applied by the Commission. At a general level, the auditors raised the discrepancies between the system developed by the OECD and the one used by the Commission; for instance, the first category adopted by the OECD relies on the notion of climate being the *primary* / principal objective of an action, meanwhile, in the EC methodology, a *significant* input into the climate objectives allows to qualify 100% of the corresponding expenditure as spent on climate (see Table below). This, auditors claim, results in a likely overestimation.

Table 1: OECD categories and EU climate coefficients

OECD		EU	
Applicable category	Categories of activity	EU climate coefficients	Example: Criteria used in European Structural and Investment Funds
2	Expenditure for activities for which climate is the principal (primary) objective.	100 %	The support makes a significant contribution towards climate change objectives.
1	Expenditure for activities for which climate is a significant, but not the principal , objective.	40 %	The support makes a moderate contribution to climate change.
0	Expenditure not targeted at climate objectives.	0 %	The support does not contribute towards those objectives or the contribution is insignificant.

Source: ECA special report: Spending at least one euro in every five from the EU budget on climate action: ambitious work underway, but at serious risk of falling short, 2016

¹⁷ See Commission's Communication '[A Budget for Europe 2020. Part II - Policy fiches](#)', COM(2011) 500 final of 29 June 2011.

The risk of overestimation has also been raised by other analyses, resulting in calls for a revised methodology of finance tracking.¹⁸

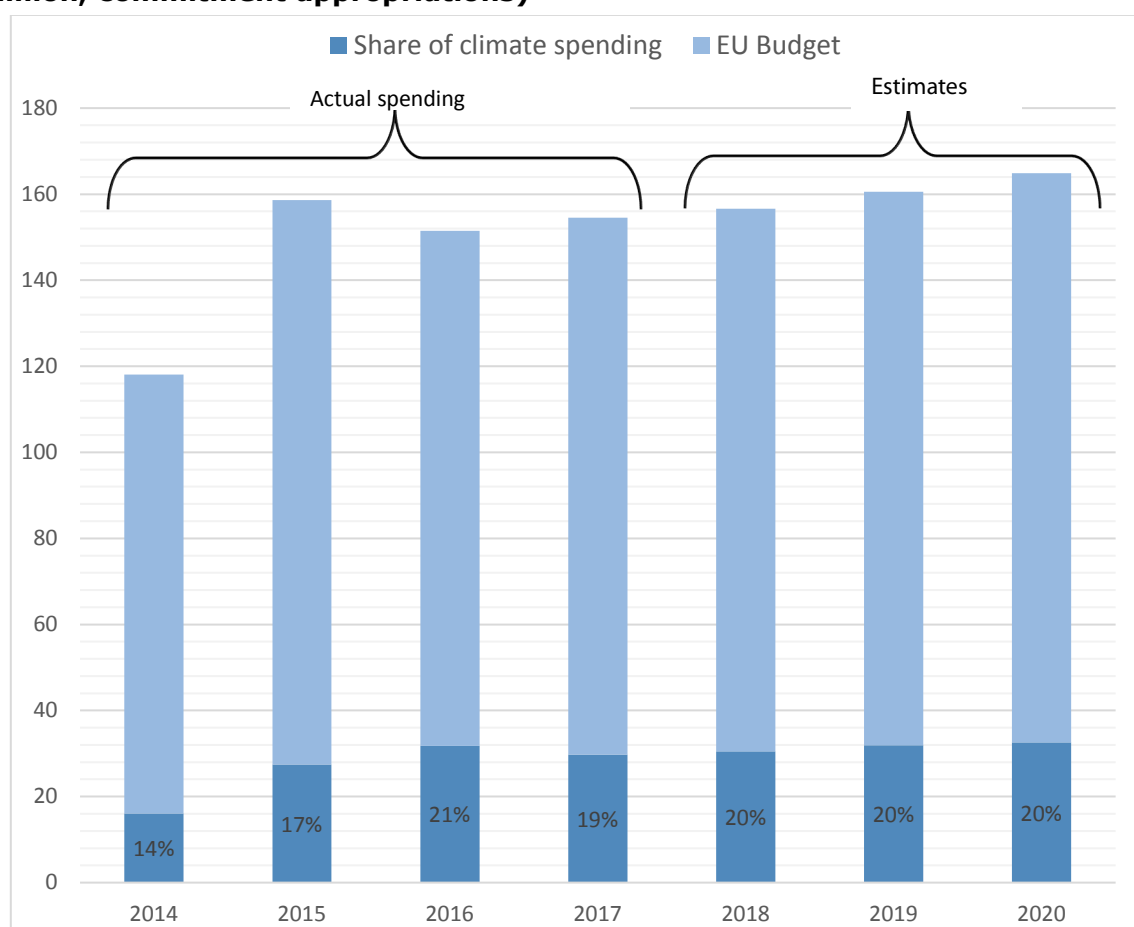
Moreover, conclusions of the Special Report point out to more punctual issues linked to estimates for particular programmes and policy areas. By way of example, the auditors considered that the contribution of the EAFRD towards the climate objectives should be revised downwards from EUR 57,2 billion to EUR 33,3 billion, i.e. by 42%. This implies a further risk of overestimation of total amounts spent, but also limitations for comparisons with other programmes, where a more conservative approach is applied, such as LIFE. Authors of the study commissioned by the DG CLIMA similarly identify some problems with the comparability of the climate-related results across different programme areas, resulting from issues with definitions and use of specific indicators (Ricardo Energy and Environment, 2017: 23).

2.1.1. Reaching the target to spend one euro in five on fight against climate change

In advance of the current MFF, the target was set to spend 20% of the EU budget on climate-related expenditure.¹⁹ In the first two years of the financial period, the overall rates of the climate-related spending the EU budget stayed far behind that target, with an estimated 13,6% in 2014 and 17,3% in 2015. According to the latest estimates of the Commission (end May 2017), the respective ratio peaked in 2016 reaching 20,9% and would be between 19 and 20% for all remaining years of the MFF. This results in the overall amount of EUR 200,1 billion, corresponding to 18,8% of the EU Budget spent on climate over the entire duration of the MFF. The graph below illustrates the evolution of the overall climate spending in 2014-2020.

¹⁸ Authors of the study by Ricardo Energy & Environment found the methodology applied for the EMFF, the EAFRD, and the EAGF as carrying the risk of overestimation of amounts dedicated to fight against climate change. Moreover, they identified some problems with the methodology of a more horizontal nature, as lack of homogeneity leading to different markers attributed to similar programmes, or lack of clarity of the meaning of 'significant' and 'moderate' contribution to climate objectives (Ricardo et al. 2017, p. 17).

¹⁹ See: https://ec.europa.eu/clima/sites/clima/files/budget/docs/pr_2013_11_19_en.pdf.

Graph 1: Share of climate relevant spending in the EU Budget, 2014-2020, (EUR million, commitment appropriations)

Source: compilation based on data of the Draft Budget 2018, Annex III, Table 2, p. 105-6.

2.1.2. Breakdown by policies and programmes

While comparing the amounts for climate related expenditure under different budgetary headings and programmes, due caution should be kept in view of reservations expressed as to the methodology applied to tracking of the climate-related spending (see above), in particular relating to the risk of the overall overestimation of related amounts and limited comparability of ratios for different headings and programmes, due to inconsistency of approach.

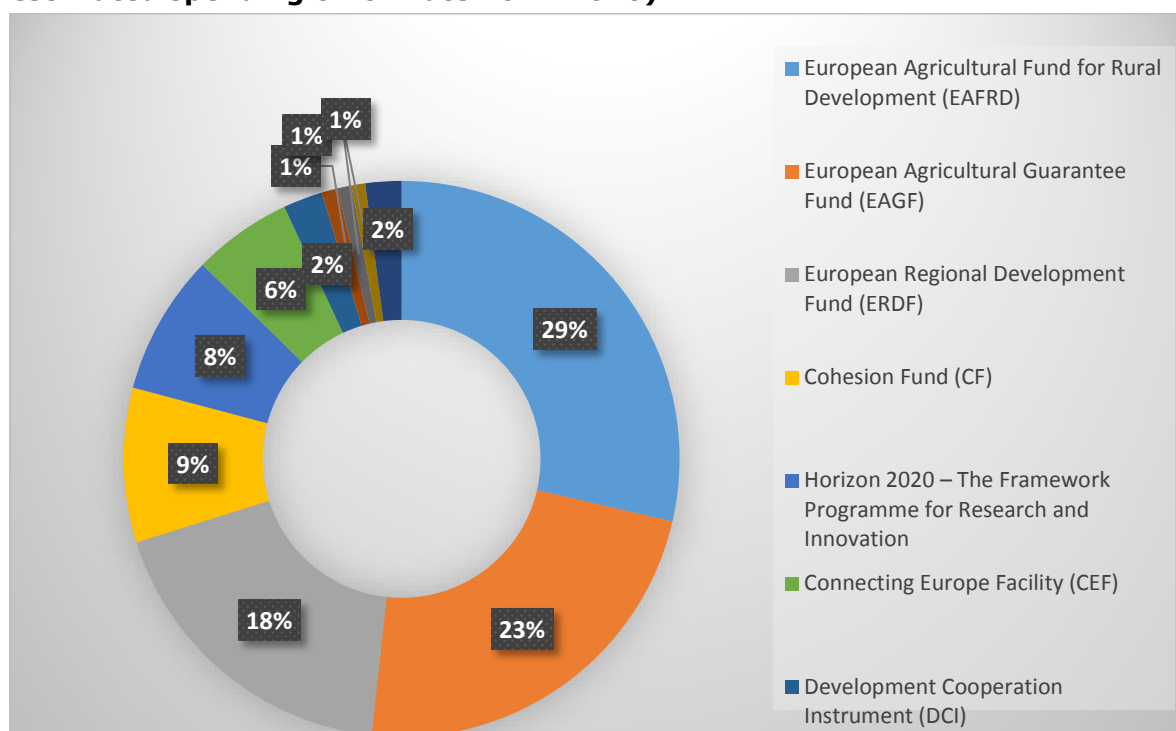
Based on the methodology applied, the expenditure under Heading 2 shows the highest overall ratio of the total expenditure on climate change, amounting to 25,3%, followed by the Heading 1a with 20,8%. Expenditure under Heading 1b and 4 are estimated to dedicate respectively 15% and 13,3% to climate, and Heading 3 only a minimal share of 0,3%. The table below presents the respective ratios for the budget headings.

Table 2: Climate allocations - breakdown per heading

Budget Heading	Climate allocation 2014-20 (EUR million)	Climate as share of total commitment appropriations under the budgetary heading
1a - Competitiveness for growth and jobs	29 508.3	20.76 %
1b - Cohesion Policy	55 655.9	14.98%
2 - Sustainable growth: natural resources	106 131.3	25.27%
3 - Security and Citizenship	46.1	0.26%
4 - Global Europe	8 783.2	13.26%
TOTAL	200 124.8	18.8%

Source: Statement of Estimates for the Financial Year 2018 (SEC(2017)250, May 2017), Annex III, Table 2 (climate allocations); Ricardo 2017, p. 123-4 (shares of the total CA)

Programmes under the Heading 2 are also those contributing the most to the EU expenditure on climate in absolute amounts: the two largest programmes, the European Agricultural Fund for Rural Development (EAFRD) and European Agricultural Guarantee Fund (EAGF) are expected to provide jointly EUR 103,5 billion, corresponding to over half of the total EU budget allocations for 2014-20. They are followed by those under the Cohesion Policy (Heading 1b), with the European Regional Development Fund (ERDF) and the Cohesion Fund expected to contribute jointly over a quarter of the total climate spending.

Graph 2: Main EU programmes contributing to climate spending (% of total estimated spending on climate 2014-2020)

Source: compilation based on data of the Draft Budget 2018, Annex III, Table 2, p. 105-6

The graph above presents the main programmes contributing to the climate spending from the EU budget; a detailed list, including the breakdown per year, is attached in the Annex II.

2.2. EXPENDITURE ON MITIGATION AND ADAPTATION TO THE CLIMATE CHANGE

As discussed in the introductory section above, actions aiming at mitigation of the climate change and those aiming at adaptation to it, are both necessary and complementary to each other in view of risks posed by the global warming. Their mainstreaming into public policies should ensure that none is neglected. As they differ substantively as to the sector of activity and financing sources, as well as financial needs, their financing should be based on separate assessment of these needs as regards mitigation efforts and adaptation respectively, taking into account the broader context of climate-related investment in the EU.²⁰ This implies that also expenditure on climate needs to be disaggregated into these two categories. At present, this is however not the case for the EU Budget - the methodology applied does not provide for such a disaggregation.

In a recent study, an attempt was made to disaggregate the EU funding for mitigation and adaptation (Ricardo et al. 2017). Based on the results, programmes focused on mitigation actions would correspond to 59% of the EU spending on climate, and those focusing on adaptation - to 41%.

As the authors stress, these figures should be taken with caution - they base on an 'experts' judgement' and an analysis of main headlines of programmes, and no in-depth analysis of the actual implementation has been carried out for that purpose. Furthermore, the assessment does not take into account the possibility of co-benefits, i.e. actions contributing to both mitigation and adaptation, at the same time. The table below presents results of the assessment of mitigation-related expenditure per programme.

²⁰ For instance, the estimated overall spending on climate change mitigation in the EU fell between 2012 and 2016 from 1,6% of the GDP to 1,2%, representing a decline by some EUR 45 billion; see: European Investment Bank, *Investment Report 2017/2018 - from recovery to sustainable growth*, available at http://www.eib.org/attachments/efs/economic_investment_report_2017_en.pdf.

Table 3: Estimate of climate and mitigation related expenditure over budget period (2014-2020)

Budget programme	Estimated climate related expenditure (2014-2020) EUR Billion	% of total climate related expenditure	Estimated mitigation related expenditure (2014-2020) EUR Billion	% of total mitigation related expenditure
EAFRD	57	28 %	6	5 %
EAGF	47	23 %	35	30 %
ERDF	37	18 %	33	28 %
CF	18	9 %	16	14 %
H2020	17	8 %	14	12 %
CEF	11	5 %	6	5 %
DCI	5	2 %	2.5	2 %
ENI	2	1 %	1	1 %
IPA II	2	1 %	1	1 %
LIFE	2	1 %	1	1 %
Copernicus	1	1 %	0.5	0 %
ESF	1	1 %	0.5	0 %
EMFF	1	1 %	1.0	1 %
Other	1	0 %	0.5	0 %
Total	201	100 %	118	100 %

Source: Ricardo et al. 2017: 227.

As this data illustrates, there are significant differences from one program to another in this respect: while the ERDF and Cohesion Fund, as well as Horizon 2020 are estimated to dedicate most (80-90%) of climate-related funding to mitigation actions, under the EAFRD 90% of climate-related spending would be devoted to adaptation efforts. As authors of the above analysis insist, programming of funding for fight with climate change needs to take these differences into account in order to be effective.

2.3. FINANCIAL INSTRUMENTS FOR CLIMATE ACTION

The European Investment Bank included the climate action among its key priorities. It has committed to mainstreaming climate-related objectives into all its financial operations, and to allocating at least 25% of its total financing to projects aiming at mitigation of and adaptation to the climate change. It declares having reached that level in late 2011 and maintaining ever since: in 2017, over 28% of EIB Group's total investments, corresponding to EUR 19,6 billion, went to climate financing.²¹ For operations in developing countries, respectively, the Bank aims at reaching 35% of the total volume by 2020.

Climate-related lending operations of the EIB focus on larger financial volumes (over EUR 20 million); lending for smaller projects is channelled through credit lines for financial intermediaries, such as local banks. Moreover, in order to attract private funds to the objectives of climate action, the EIB also developed a number of innovative financial instruments, such as the Climate Awareness Bonds (Green Bonds) in the sectors of

²¹ Source: EIB, <http://www.eib.org/projects/priorities/climate-and-environment/climate-action/index.htm>.

renewable energy and energy efficiency, or CAMENA, the climate-action envelope to support the fight against climate change in the Mediterranean Neighbourhood, among others.

In terms of geographical distribution of the climate-related EIB investments, there are significant differences between the EU countries. In 2016 EIB provided financing of **EUR 17.5 billion in the EU for climate action projects**, corresponding to some 26,2% of the total envelope of EUR 67 billion²². While climate related actions represented a large ratio of the overall volume of EIB-financed operations in some countries (90,7% for Lithuania, 74,2% for Austria, 55,2% for Finland, 53,2% for Belgium), it was very low in a number of others (e.g. 0,5% for Denmark, around 1% for Bulgaria and Greece, 1,9% for Czech Republic and Croatia). The table below presents the allocation breakdown per country.

Table 4: EIB financing for climate action in 2016, breakdown per country in EUR million

	Amount signed	Climate action	Ratio of the EIB financing
Belgium	2 284	1 216	53,2%
Bulgaria	467	5	1,1%
Czech Republic	526	10	1,9%
Denmark	374	2	0,5%
Germany	7 512	2 209	29,4%
Estonia	430	80	18,6%
Ireland	825	198	24,0%
Greece	1 516	19	1,3%
Spain	10 043	623	6,2%
France	8 001	2 773	34,7%
Croatia	530	10	1,9%
Italy	9 846	2 196	22,3%
Cyprus	215	14	6,5%
Latvia	-	-	-
Lithuania	215	195	90,7%
Luxembourg	62	3	4,8%
Hungary	692	140	20,2%
Malta	92	12	13,0%
Netherlands	2 565	420	16,4%
Austria	1 447	1 073	74,2%
Poland	4 444	1 266	28,5%
Portugal	1 482	125	8,4%
Romania	1 036	109	10,5%
Slovenia	136	7	5,1%
Slovakia	874	63	7,2%
Finland	2 220	1 226	55,2%
Sweden	1 688	377	22,3%
United Kingdom	6 910	2 956	42,8%
Regional - EU countries	540	207	38,3%
TOTAL	66 971	17 530	26,2%

²² 2016 Statistical Report - European Investment Bank

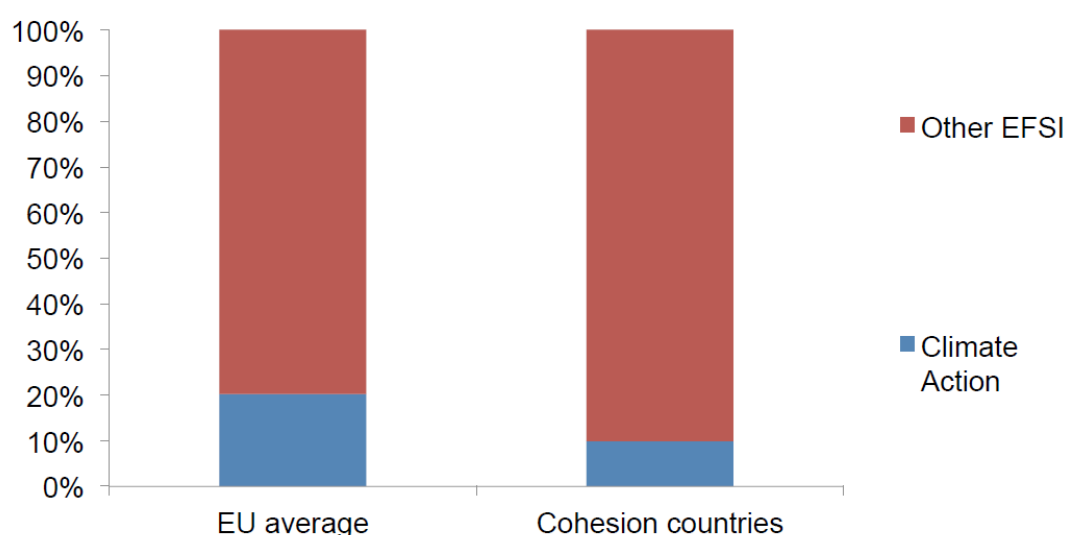
Source: 2016 Statistical Report - European Investment Bank; for ratio of the EIB financing - own calculations

As independent analyses point out,²³ the 2016 EIB investments in the field of climate in the 'cohesion countries'²⁴ only reached 16%. This implies the concentration of the related EIB actions in the EU wealthier countries.

As concerns financing operations **outside the EU territory**, according to the EIB data, the volume of its climate-related financing operations in 2016 stood at EUR 1,9 billion. Most of this amount - 65% - was invested in the sector of transport, followed by energy (16%), SMEs (9%) and agriculture and forestry (6%).²⁵

Climate action is also specifically mentioned as field of activity eligible for support from the **European Fund for Strategic Investments (EFSI)**, under the objective 'environment and energy efficiency'. The Regulation furthermore sets the EU climate framework as an obligatory reference for the EFSI operations under the objective 'development of the energy sector'. However, according to an analysis by the CEE bankwatch network²⁶, in 2016 out of EUR 12.5 billion projects covered by an EFSI guarantee only 20% contributed to climate change mitigation and adaptation, significantly below the threshold of 25% set for the previously existing EIB-managed financial instruments. In 'cohesion countries' this percentage was even lower, reaching 13%.²⁷ The graph below illustrates these findings.

Graph 3: Share of climate action measures within EFSI in 2016



²³ CEE Bankwatch Network (2017), 'Winners and losers of climate action at the EIB'

²⁴ Countries where Gross National Income (GNI) per inhabitant is less than 90 per cent of the EU average: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia

²⁵ Source: European Investment Bank (2017), The EIB outside the EU, http://www.eib.org/attachments/country/eib_rem_annual_report_2016_en.pdf.

²⁶ <https://bankwatch.org/wp-content/uploads/2017/07/Briefing-EIB-climateaction-May2017.pdf>

²⁷ Source: Roggenbuck A. (2017), "Doing the same thing and expecting different results? Analysis of the sustainability and transparency of the EFSI", CEE bankwatch Network, Counterbalance, Climate Action Network Europe, WWF, p.11.

Source: CEE bankwatch network

As for other EIB operations, some external analyses carried out by NGOs criticise excessive concentration of EFSI operations in the most developed EU countries;²⁸ reportedly in 2016 as many as eight EU countries did not receive any financing from EFSI for climate-related projects.²⁹

With the extension of EFSI to EFSI 2.0 the European Parliament endorsed a new 40% target of EFSI infrastructure and innovation projects to contribute to climate action in line with the Paris Agreement. EFSI 2.0 also explicitly targets new sectors: sustainable agriculture, forestry, fisheries and aquaculture.

²⁸ According to this analysis, 70% of EFSI support for renewable energy was directed to Belgium, and 80% of the support for energy efficiency to only three countries - France, Finland and Germany; CEE bankwatch network briefing, Winners and losers of climate action at the EIB.

²⁹ Roggenbuck A. (2017), 'Doing the same thing and expecting different results?', p. 12.

3. CONCLUDING REMARKS

In the view of the current situation, it is clear that for an adequate response to risks posed by the climate change, it is necessary to combine actions both aiming at the mitigation of the climate change, and at adapting to it. However, analysts point out that in the absence of targets for these two types of actions, *'there is a limited potential to enforce the integration of adaptation and mitigation objectives with an equal emphasis'* and recommend establishing separate targets.³⁰ As noted in the earlier section, separate targets would logically need to be accompanied by the appropriate tracking of financing of the two types of actions.

More fundamentally, as regards the policy design, it has been pointed out that the mainstreaming of fight against climate change into EU policies and the accompanying target of 20% of the budget contributing to that goal has not been devised based on a systematic analysis of different policies and their potential with respect to adaptation and mitigation measures. This observation is accompanied by the finding that mainstreaming of the fight against climate change has been implemented for some policies to a greater degree than for others, leaving therefore significant potential for EU action unexploited.

Furthermore, according to the study published last September, no analysis has been carried out of potential adverse impacts of EU policy on climate and such impacts are not mitigated consistently.³¹

Bearing in mind that CAP spending represents almost 50% of the EU budget whereas agriculture sector is considered as the third to fifth largest³² contributor to climate change after transport and industry it seems that the way the EU budget will be shaped in future will play a crucial role in supporting climate action. Some researchers³³ confirm that although agricultural sector, alongside forest land use, has considerable potential in reaching climate mitigation objectives, through its role in carbon sequestration, much remains to be done in CAP towards climate relevant measures since they are adopted either with no specific, quantified objectives for emissions reduction/sequestration (e.g. the pillar 1 greening measures) or with very low targets set in the context of a sector-wide contribution to climate action.

Similarly, with regard to EFSI operations, critics have raised that fossil fuel and traditional transport based project loans have not been excluded and still play an important role. According to some NGOs³⁴ projects based on fossil fuels represented almost an equal share

³⁰ Ricardo et al. 2017, p. 11.

³¹ Ibid, p. 12.

³² Estimated from 6 to 23 per cent share of global greenhouse gas emissions depending on the source of the study. https://www.google.com/search?q=climate+change+contributors+per+sector&client=firefox-b-ab&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiS3Pj3sITZAhVQJVAKHYLDB7YQ_AUICigB&biw=1366&bih=594

³³ Hart K. et al. (2017) 'The consequences of climate change for EU agriculture: follow up of the COP21 UN Paris Climate Change Conference' Institute for European Environment Policy for EP AGRI committee

³⁴ https://bankwatch.org/press_release/new-report-junker-plan-backs-billions-in-fossil-fuels-and-carbon-heavy-infrastructure

to renewable energy funding (EUR 1.8 billion to EUR 2 billion). Individual transport modes and investments in motorways and automotive industry would also be privileged, with sustainable transport projects such as railway or urban mobility only receiving 13% of EFSI operations in the transport sector.

It was also pointed out that existing measures are not fully exploited. Rural Development Programme (RDP) budgetary allocations to climate priorities are much lower than for other priorities, and targets against climate related indicators have not been set in all regions and where they have, are oftentimes very low mainly because Member States are free to decide how these measures are implemented.³⁵ These criticisms are echoed by the ECA: in a recent briefing the Court notes that the objective of the greening measure to enhance the CAP's environmental performance lacked specific targets for the measure's contribution to environment and climate and calls for objectives to be quantified where possible, not just for outputs, but also for results and impact.³⁶

³⁵ Idem

³⁶ Future of the CAP, ECA, March 2018

https://www.eca.europa.eu/Lists/ECADocuments/Briefing_paper_CAP/Briefing_paper_CAP_EN.pdf

SELECTED REFERENCES

- Campillos et al. (2017) 'Climate Action and the EU Budget Key Issues for the Post-2020 Multiannual Financial Framework, E3G'
The Briefing makes a number of recommendations on how the post-2020 MFF could address climate action.
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The briefing paper makes a number of reform suggestions for EU environmental policy.
- Eichler et al. (2017) 'Assessing the state-of-play of climate finance tracking in Europe'
The report analyses the current spending of the EU on environmental policy, focusing on predicted investment needs for the future, actual current spending and planned spending on both EU and national level.
- European Commission (2013) 'An EU budget for low-carbon growth', available at https://ec.europa.eu/clima/sites/clima/files/budget/docs/pr_2013_11_19_en.pdf.
This press release spells out the investment targets of the European Union for the 2014-2020 MFF.
- European Commission DG Environment (2016) 'Annual Activity Report'
The report summarizes the activities of the European Commission DG Environment, providing an overview of EU policy and financing in the field of environmental protection
- European Court of Auditors (2017) 'EU action on energy and climate change'
The report is largely focusing on EU environmental legislative activity and the work of the ECA and national SAI's in the sector. It also presents the current situation of the progression of climate change in different fields.
- European Court of Auditors (2016) 'Spending at least one euro in every five from the EU budget on climate action: ambitious work underway, but at serious risk of falling short'
The report analyses EU expenditure on the environment in regards to the 20% target, giving both general statistics on the entire budget, as well as presenting numbers of selected programmes, such as Horizon 2020.
- European Investment Bank (2017) 'EIB Climate Strategy' available at http://www.eib.org/attachments/strategies/eib_climate_strategy_en.pdf
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- European Investment Bank, 'Investment Report 2017/2018 - from recovery to sustainable growth', available at http://www.eib.org/attachments/efs/economic_investment_report_2017_en.pdf

Chapter 4 of the report provides findings and policy conclusions on the spending on the climate change mitigation in the EU.

- Ricardo et al. (2017) 'Climate mainstreaming in the EU Budget: preparing for the next MFF' prepared for the Directorate-General for Climate Action of the European Commission.
The report gives a detailed overview of current EU expenditure on climate change in total, as well as by fund. It also provides estimates of investment needs.
- Gaventa et al. (2017) 'The Future of Europe and the Future of Climate Action Reflections and Scenarios for the EU27'
The paper evaluates the state of EU climate policy and examines how climate governance fits within the 'Future of Europe' process led by the European Commission. It also gives recommendations for improvement.
- Hart et al. (2017) , 'The Consequences of Climate Change for EU Agriculture. Follow-Up to the Cop21 - UN Paris Climate Change Conference' prepared for the European Parliament AGRI Committee.
This report reviews and discusses the implications for the agriculture sector of the COP21 UN Paris climate change conference and the recent EU climate policy proposals for 2030. It looks specifically at the role that the Common Agricultural Policy (CAP) plays in supporting climate action within the agriculture sector and considers how the CAP might evolve post 2020 to support the agricultural sector in reducing GHG emissions and adapting to climate change.
- Holyoake, David; Bruner Ariel; Trilling Markus (2017) 'A Vision for the Next EU Budget'
The briefing critically evaluates the 2014-2020 MFF and makes recommendations for improvement for the post-2020 MFF. Its focus lies on environmental policy and spending.
- Moosmann et al. (2016) 'Implementing the Paris Agreement – Issues at Stake in View of the COP 22 Climate Change Conference in Marrakesh' prepared for the European Parliament ENVI Committee.
This study summarises the developments leading to the adoption of the Paris Agreement on climate change in 2015 and provides an overview of its contents.
- Nesbit, Martin; Paquel, Kamila; Illes, Andrea (2017) 'Cohesion Policy and Paris Agreement Targets' prepared for Policy Department B of the European Parliament. This study examines experience of the mainstreaming of climate policy objectives into cohesion policy in the current (2014-2020) and earlier programming periods. It identifies the implications of the Paris Agreement on climate change, and makes recommendations for further development of climate mainstreaming in cohesion policy in future programming periods.
- Rademaekers et al. (2017) 'Assessing the European clean energy finance landscape, with implications for improved macro-energy modelling' prepared for the European Commission Directorate General for Energy.

The study presents and reviews private and public financial instruments on climate action and environmental protection.

- Roggenbuck, Anna (2017), 'Doing the same thing and expecting different results? Analysis of the sustainability and transparency of the European Fund for Strategic Investments' Analysis of the environmental sustainability and of the transparency of results achieved by EFSI, in a joint cooperation of the CEE bankwatch network, 'CounterBalance', CAN - Climate Action Network, and WWF.
- Sand Jespersen et al. (2016) 'Mainstreaming of climate action into ESI Funds' prepared for the European Commission.
The report looks into climate related spending in ESI Fund, analysing the expenditure in detail per fund as well as distinguishing between mitigation and adaptation spending in each fund.

ANNEX I: WEATHER AND CLIMATE-RELATED NATURAL HAZARDS IN EUROPE

- Since 2003, Europe has experienced several extreme summer heat waves. Such heat waves are projected to occur as often as every 2 years in the second half of the 21st century, under a high emissions scenario (RCP8.5). The impacts will be particularly strong in southern Europe.
- Heavy precipitation events have increased in northern and north-eastern Europe since the 1960s, whereas different indices show diverging trends for south-western and southern Europe. Heavy precipitation events are projected to become more frequent in most parts of Europe.
- The number of very severe flood events in Europe has varied since 1980, but the economic losses have increased. It is not currently possible to quantify the contribution due to increased heavy precipitation in parts of Europe compared with better reporting and land use changes.
- Observations of windstorm location, frequency and intensity have showed considerable variability across Europe during the 20th century. Models project an eastward extension of the North Atlantic storm track towards central Europe, with an increase in the number of cyclones in central Europe and a decreased number in the Norwegian and Mediterranean Seas. For medicanes (also termed Mediterranean Sea hurricanes), a decreased frequency but increased intensity of medicanes is projected in the Mediterranean area.
- Landslides are a natural hazard that cause fatalities and significant economic losses in various parts of Europe. Projected increases in temperature and changes in precipitation patterns will affect rock slope stability conditions and favour increases in the frequency of shallow landslides, especially in European mountains.
- The severity and frequency of droughts appear to have increased in parts of Europe, in particular in southern and south-eastern Europe. Droughts are projected to increase in frequency, duration, and severity in most of Europe, with the strongest increase projected for southern Europe.
- Forest fire risk depends on many factors, including climatic conditions, vegetation, forest management practices and other socio-economic factors. The burnt area in the Mediterranean region increased from 1980 to 2000; it has decreased thereafter. Projected increases in heat waves together with an expansion of the fire-prone area will increase the duration of fire seasons across Europe, in particular in southern Europe.
- Observational data between 1970 and 2015 show that alpine avalanches cause on average 100 fatalities every winter in the Alps. Increased temperatures are expected to lead to decreases in alpine snow cover and duration, and in turn to decreased avalanche activity below about 1 500-2 000 m elevation in spring, but increased avalanche activity above 2 000 m elevation, especially in winter.
- Hail is responsible for significant damage to crops, vehicles, buildings and other infrastructure. Despite improvements in data availability, trends and projections of hail events are still subject to large uncertainties owing to a lack of direct observation and inadequate microphysical schemes in numerical weather prediction and climate models.
- Extreme high coastal water levels have increased at most locations along the European coastline. This increase appears to be predominantly due to increases in mean local sea level rather than to changes in storm activity. Projected changes in the frequency and intensity of storm surges are expected to cause significant ecological damage, economic loss and other societal problems along low-lying coastal areas in northern and western Europe, unless additional adaptation measures are implemented.

Source: European Environment Agency report No15/2017 <https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster>

ANNEX II: FINANCING CLIMATE ACTION - 2014-2020 PROGRAMMING PERIOD

PROGRAMME	2014-2017				2018-2020 estimates			Total 2014-2020
	2014	2015	2016	2017	2018	2019	2020	
<i>For Reference: Total EU Budget (Section III-Commission, Financial programming)</i>	118 054,4	158 606,8	151 498,4	154 507,1	156 623,4	160 553,9	164 880,1	1 064 724,0
Total Climate Change finance in the EU budget	16 098,3	27 451,8	31 738,1	29 792,9	30 481,2	31 956,0	32 606,7	200 124,8
Share of climate relevant spending in EU budget	13,6%	17,3%	20,9%	19,3%	19,5%	19,9%	19,8%	18,8%
HEADING 1a — COMPETITIVENESS FOR GROWTH AND JOBS	3 335,7	3 345,1	4 014,1	4 107,7	4 343,4	5 032,1	5 330,2	29 508,3
European Earth Observation Programme (Copernicus)	113,5	195,8	202,8	209,6	220,8	298,7	213,1	1 454,3
Horizon 2020 – The Framework Programme for Research and Innovation	2 071,5	2 097,9	2 053,7	2 296,2	2 415,7	2 585,3	2 831,6	16 351,9
Connecting Europe Facility (CEF)	1 129,5	1 029,8	1 736,5	1 578,0	1 683,1	2 123,4	2 258,6	11 538,9
Programme for the Competitiveness of Enterprises and SME (COSME)	21,2	21,6	21,1	23,9	23,8	24,7	26,9	163,2
HEADING 1b — COHESION POLICY	5 339,0	8 955,5	7 510,4	8 052,2	8 339,9	8 606,5	8 852,4	55 655,9
European Regional Development Fund (ERDF)	3 144,6	6 121,2	4 959,2	5 387,3	5 581,5	5 748,7	5 908,6	36 851,1
Cohesion Fund (CF)	2 194,4	2 811,9	2 415,3	2 503,0	2 596,5	2 695,9	2 781,9	17 998,9
European Social Fund (ESF)	0,0	22,4	135,9	161,9	161,9	161,9	161,9	805,9
HEADING 2 — SUSTAINABLE GROWTH: NATURAL RESOURCES	6 675,0	14 073,7	19 042,5	16 279,9	16 407,2	16 814,0	16 838,9	106 131,3
European Agricultural Guarantee Fund (EAGF)	3 316,0	3 273,0	7 938,0	7 643,0	7 743,0	8 164,0	8 172,0	46 249,0
European Agricultural Fund for Rural Development (EAFRD)	3 034,0	10 461,0	10 749,0	8 264,0	8 270,0	8 240,0	8 242,0	57 260,0
European Maritime and Fisheries Fund (EMFF)	139,0	140,0	142,0	144,0	147,0	148,0	151,0	1 011,0
Programme for the Environment and Climate Action (LIFE)	186,0	199,7	213,5	228,9	247,2	262,0	273,9	1 611,3
HEADING 3 — SECURITY AND CITIZENSHIP	6,9	6,1	6,9	5,9	5,8	7,0	7,5	46,1
Union Civil Protection Mechanism	6,9	6,1	6,9	5,9	5,8	7,0	7,5	46,1
HEADING 4 — GLOBAL EUROPE	741,6	1 071,4	1 164,3	1 347,2	1 385,0	1 496,4	1 577,7	8 783,2
Union Civil Protection Mechanism	1,2	2,0	2,1	2,2	2,3	2,5	2,6	14,9
Instrument for Pre-accession Assistance (IPA II)	90,1	210,3	171,7	305,4	250,8	270,1	288,4	1 586,7
EU Aid Volunteers initiative (EUAV)	0,0	0,3	1,0	2,5	1,7	1,9	2,3	9,6
Instrument of financial support for encouraging the economic development of the Turkish Cypriot community	3,0	11,5	16,5	3,0	12,0	0,0	0,0	46,0
European Neighbourhood Instrument (ENI)	185,0	268,0	250,6	259,2	272,9	309,2	343,9	1 888,7
Development Cooperation Instrument (DCI)	379,9	503,8	639,8	682,5	748,5	803,7	837,2	4 595,4
Instrument contributing to Stability and Peace (IcSP) *	0,0	5,0	0,0	5,5	0,0	8,5	0,0	19,0
Partnership instrument for cooperation with third countries (PI)	35,3	22,3	32,9	26,9	34,6	37,2	39,0	228,0
Humanitarian Aid	36,2	37,3	37,9	43,1	50,0	51,0	52,0	307,5
European Instrument Democracy and Human Rights (EIDHR) *	5,0	5,0	5,0	10,0	5,0	5,0	5,0	40,0

PROGRAMME	2014-2017				2018-2020 estimates			Total 2014-2020
	2014	2015	2016	2017	2018	2019	2020	
Cooperation with Greenland *	6,0	5,9	6,8	6,9	7,2	7,3	7,3	47,4
<i>*IcSP, EIDHR and Cooperation with Greenland were not included in the MTR.</i>								

Source: European Commission, Draft Budget 2018, Annex III, Table 2, p. 105-6

The present note has been drafted as a background document for the hearing on 'The EU Budget and the Paris Climate Agreement' of the EP BUDG and ENVI Committees. It aims at providing an introduction to the topic, looking at the EU commitments in the field of climate from a budgetary angle. It contains a brief overview of the policy context, a presentation of budgetary aspects, including a short part on methodology of tracking the climate-related expenditure and on distinction between adaptation and mitigation measures, and finishes with concluding remarks on the state of play as regards EU budget for fight against climate change.

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